Executive Summary

The Alaska Department of Transportation and Public Facilities (DOT&PF) retained Kinney Engineering, LLC (KE) to prepare a Traffic Reconnaissance Study for the Ocean Dock Road and C Street ramps. The purpose of the C Street / Ocean Dock Road Access Ramps Reconnaissance Study is to identify safety, maintenance, and freight mobility concerns in the area around the intersection of Ocean Dock Road and C Street ramps. The study will also analyze alternatives with the aim of mitigating known concerns.

Ocean Dock Road is a north-south roadway with a single lane in each direction from the Port of Anchorage (POA) to Whitney Road. The C Street access ramps allow northbound and southbound traffic to enter and exit C Street from Ocean Dock Road. The study area contains multiple at-grade railroad crossings.

Concerns and issues for the study area were identified using a variety of methods including:

- *Data collection and analysis*. Turning movement volumes, speeds, sight distance, pedestrian paths and volumes, crash history, and field observations were collected by the study team. Analyses included evaluations of vehicle and pedestrian safety and operations.
- *Stakeholder input*. Participants in the agency field visit and in the advisory council meeting provided information regarding difficulties or concerns within the study area.
- *Public involvement*. An online survey was prepared to gather public input on issues or concerns within the study area. The survey was advertised via the members of the advisory council and through postcards that were mailed to 1,300 residents and businesses in the area.

C Street is the only roadway that provides civilian access to Government Hill, a residential and commercial district just north of the study area. Access to the Ship Creek multi-purpose trail is just south of the C Street and Ocean Dock ramps intersection, drawing pedestrian and bicyclists through the study area. The intersection is the most direct route to the Ship Creek boat launch and the POA. Almost half of the vehicles using the intersection are trucks moving into and out of the POA. This high number of trucks requires special consideration for mobility and safety.

The main issues and concerns identified for the study area are depicted in Figure 1 and include the following:

- Sight distance is limited by the retaining wall located on the north side of the intersection and inside the east/west horizontal curve that connects the west bound C Street off ramps and Ocean Dock Road. While the minimum stopping sight distance for passenger vehicles is met, participants in both the agency field visit and in the advisory council meeting expressed concerns about driver comfort. The measured sight distance for a variety of conditions and vehicles can be found in Sections 3.2.1 and 3.2.2.
- There are two at-grade railroad crossings in the study area, and several others nearby. Interactions between trains and vehicles cause operational delays for all parties involved.
- Pedestrians and bicyclists are prohibited from traveling along C Street; however, many pedestrians and bicyclists were observed traveling along the ramps. Observations of pedestrian and bicyclist travel through the study area can be found in Section 3.5.8.

- Poor drainage at the intersection creates ponding in the spring and has increased the rate of pavement degradation. Sections 3.2.4 and 3.2.5 describe the existing conditions for the pavement and drainage structures, respectively.

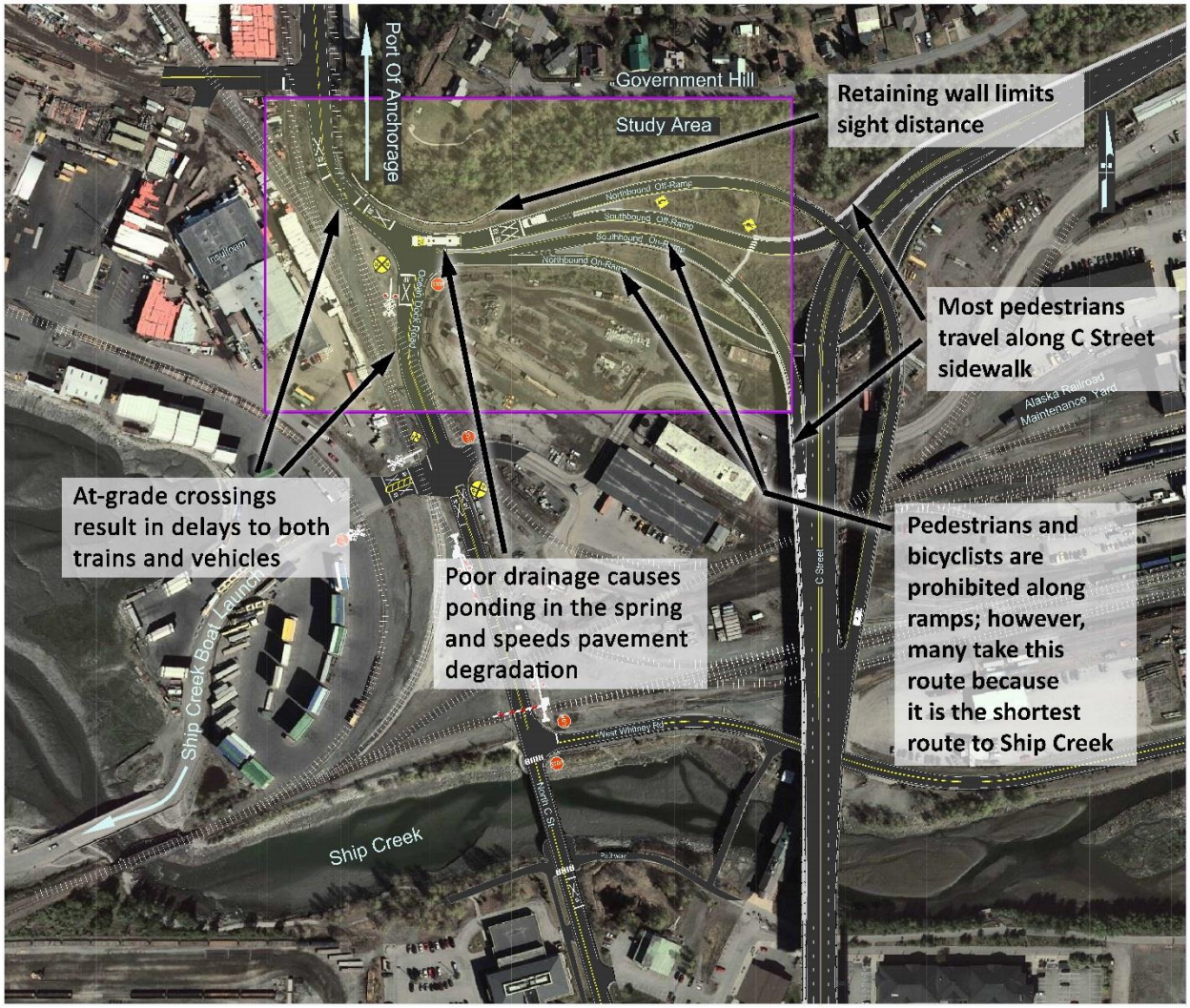

Figure 1: Identified Issues and Concerns

Four potential alternatives have been developed to address these concerns:

- Alternative 1 is the no build alternative. Under this alternative, none of the identified concerns would be addressed. The cost of this alternative is ongoing pavement maintenance at an accelerated rate. See Section 6.1 on page 43.
- Alternative 2 would keep the existing intersection geometry, but would repair the existing drainage system, add fin drains to improve drainage, and install an additional active advanced warning for the train crossing. However, pedestrian and bicyclist facilities would not be upgraded and at-grade railroad crossings would continue to cause delay and discomfort. The cost of this alternative is estimated to be $2,605,000. See Section 6.2 on page 46.

- Alternative 3 would cut back the hill on the north side of the intersection and widen the roadway to improve sight distance and to provide for a left-turn lane into the railway yard to the north on Ocean Dock Road and to provide a pedestrian median refuge for a new pedestrian crossing at the intersection. The C Street pedestrian pathway would be connected to Ocean Dock Road via a sidewalk on the north side of the C Street ramps. The existing drainage system would be repaired or replaced and fin drains would be installed to improve drainage. At-grade railroad crossings would remain in their current configuration. The cost of this alternative is estimated to be $4,288,000. See Section 6.3 on page 50.
- Alternative 4 would completely realign the study intersection, with the potential to realign railroad tracks under coordination with ARRC, with the aim of reducing the number of railroad crossings. Drainage improvements and pedestrian/bicycle connectivity improvements would also be made. The cost of this alternative is estimated to be between $4 and $10 million, depending on the track improvements. See Section 6.4 on page 55.